

Marketing assets: Relating brand equity and customer equity

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Abstract

Purpose: Brand equity and customer equity are inextricably linked. Some authors propose that marketing activities build these intangible assets simultaneously. In contrast, others suggest that brand equity is an antecedent of customer equity. In this research, we aim to shed light about the relationship between brand equity and customer equity, by empirically testing these two alternative explanations.

Design/methodology: We propose four research models that reflect these two alternatives explanations regarding the link between brand equity and customer equity. In order to estimate these models we employ Structural Equations Modelling. We measure model variables using data collected through a survey to marketing managers of services companies that operate in Spain. We compare these four research models in terms of explanatory power and goodness of fit.

Findings: Our results indicate that the models that correspond to the simultaneity approach have a higher explanatory power and goodness of fit than the models that suggest that brand equity is an antecedent of customer equity, thus supporting that these intangible assets are built by marketing activities at the same time.

Research limitations/implications: Our results recommend caution when interpreting previous research about the effects of brand (customer) equity, as they might indeed correspond to customer (brand) management. Similarly, future research focusing on customer and brand management need to take into account both managerial areas in their studies.

Practical implications: From a practitioners' point of view, our findings suggest adopting a brand-customer portfolio approach to enhance company profitability. Similarly, we derive implications for firm valuation processes, which incorporate brand equity and customer equity in their calculations.

Originality/value: We empirically study the relationship between brand equity and customer equity, while previous research has analyzed this topic only at a theoretical level. Clarifying this link enriches our comprehension about how companies build these marketing intangible assets and increases the accuracy of firm valuation processes.

Keywords: Brand equity, Customer equity

Jel Codes: M31

1. Introduction

Brand and customer portfolios are intangible marketing assets that help companies to make profits because of their effect upon competitive advantages. Academic literature has studied how to manage (build and develop) and measure the value — Brand Equity (hereafter, BE) and Customer Equity (CE) — that these assets provide to companies. In short, BE is the differential effect of brand knowledge (including brand image and brand awareness) on consumer response to the elements of marketing mix for the brand in comparison to the same elements of a fictitiously named or unnamed version of the product or service (Keller, 1993, 2008). In contrast, CE has a purely financial nature, as is the discounted stream of expected profits from the actual and potential customers of a firm (Rust, Lemon & Zeithaml, 2004). In this research we use the terms BE and CE to describe the assets built by marketing activities focused on brands and customers, respectively, and that are expected to provide future cash flows to a company (Hogan, Lemon & Rust, 2002; Yoo, Donthu & Lee, 2000; Villanueva, Yoo & Hanssens, 2008).

Research efforts involving BE and CE have generally constituted well-differentiated lines of research. On the one hand, BE studies spread in the early 1990s and tend to concentrate on its conceptualization and measurement (Aaker, 1991; Keller, 1993; Netemeyer, Krishnan, Pullig, Wang, Yagci, Dean, Ricks & Wirth, 2004; Wang, Hsu & Fang, 2009; Christodoulides & de Chernatony, 2010). On the other hand, the concept of CE has become popular over the past ten years and its research focuses on its measurement and optimization (e.g.: Berger & Nasr, 1998; Allenby, Leone & Jen, 1999; Gupta, Lehmann & Stuart, 2004; Venkatesan & Kumar, 2004; Fader, Hardie & Lee 2005a, 2005b; Wiesel, Skiera & Villanueva, 2008).

Hence, there is some parallel development of the research into BE and CE, and these concepts are intimately related (Leone, Rao, Keller, Luo, Mcalister & Srivastava, 2006; Spyropoulou, Skarmas & Katsikeas, 2011; Luo, Lehmann & Neslin, 2015). Building BE modifies customer choices and brand sales, producing cash flows from the customer to the company (Srivastava, Shervani & Fahey, 1998; Kim, Kim Woo & An Jeong, 2003; Rao, Agarwal & Dahlhoff, 2004; Johansson, Dimofte & Mazvancheryl, 2012), in short BE. Similarly, CE increases BE through several ways, “including: social influence, market presence, customer satisfaction, advocacy and network externalities” (Luo et al., 2015). Furthermore, building BE and CE requires having the similar marketing capabilities (marketing capabilities understood as the ability of a firm to efficiently deploy and manage its marketing resources; Porter, 1985, 1991). Both BE and CE are related with specific outputs - competitive advantages, namely customers’ loyalty and their willingness to pay price premiums (Lassar, Mittal & Sharma, 1995; Taylor, Celuch & Goodwin, 2004; Del Río, Vázquez & Iglesias, 2001; Faircloth, Capella & Alford, 2001; Alawadi, Lehmann, and Neslin 2003; Kim & Kim Woo, 2005; Rust, Lemon et al., 2004).

Despite these coincidences, there are seldom studies about the potential links between BE and CE (Villanueva & Hanssens 2007). The few studies to date of the connection between BE and CE adopt two different perspectives. On the one hand, some authors posit that the management of brands and customers could have some similar effects (Ambler, Bhattacharya, Edell, Keller, Lemon & Mittal, 2002; Leone et al., 2006) and that there may be synergies in brand and customer management (Luo et al., 2015). These (theoretical) studies do not provide any empirical support for their conclusions. According to the authors that follow this perspective, BE and CE could occur simultaneously or even be two sides of the same asset (i.e., could be overlapping assets). Romero and Yagüe (2015) show that marketing managers indeed support this view, although still manage brands and customers somehow independently. On the other hand, Rust, Lemon et al. (2004) suggest that BE is an antecedent of CE, given that brands affect customers’ choices across time and, therefore, the stream of profits provided

by these customers during their lifetimes. More specifically, BE influences acquisition and retention rates and profit margins, which are three key components of CE (Stahl, Heitmann, Lehmann & Neslin, 2012). Under this perspective, brand management is a tool for customer management.

These two conflicting points of view have important theoretical and practical implications. Clarifying if BE and CE are assets that either are built simultaneously or an antecedent and its consequence constitutes, for instance, a strong base for linking the separated research streams on BE and CE. Similarly, research about marketing profitability formation – an important topic that is generating a growing interest among academics and practitioners (Rust, Ambler, Carpenter, Kumar & Srivastava, 2004) – requires accurately identifying how marketing activities (brand management and customer management) contribute through customers' loyalty or margins to company returns and, ultimately, to firm value. From a practitioners point of point of view, understanding the bond between BE and CE has a direct application in terms of marketing decisions aiming to enhance the long-term value of a company (Kumar, Lemon & Parasuraman, 2006). The assessment of firm value also requires a complete comprehension of the connection between BE and CE, given that both are intangible assets that affect firm valuation. Nevertheless, despite its theoretical and practical implications, up to our knowledge there are not studies that directly compare both views in the same research. The link between BE and CE remains obscure.

In this research we fill this gap by proposing four alternative research models that follow the two competing perspectives regarding the connection between BE and CE. We depart from the resource-based view theory to propose these models. They posit that marketing capabilities produce marketing assets (BE and CE); and that such marketing assets provide competitive advantages (customers' loyalty and price premiums) to companies. We validate these models using survey data from a sample of marketing managers, grounding our findings on managerial practice. We examine our estimation results in the light of the competing perspectives and compare them in terms of their explanatory power and goodness of fit. Thus, we contribute to current knowledge about the connection between BE and CE by empirically testing the existing alternative explanations of such link.

Our findings indicate that BE and CE are intangibles assets that are built simultaneously by companies, against previous evidences that assume that BE is an antecedent of CE (e.g.: Chen & Myagmarsuren, 2011; Hao, Ko & Tailor, 2010; Allaway, Huddleston, Whipple & Ellinger, 2011; Ramaseshan, Rabbane & Tan Hsin Hui, 2013). Moreover, our results indicate that BE and CE could just respond to different perspectives of the valuation of a more general and holistic marketing asset. From a theoretical point of view, our results recommend enriching BE and CE research streams by integrating them, avoiding its

current separation. Marketing profitability research and management require adopting a joint perspective of these assets. The BE-CE connection is the key for building stronger brands and increasing the customer base of a firm (Kumar, Lemon & Parasuraman, 2006; Luo et al., 2015) in order to ensure sustainable competitive advantages. According to our results a growth in BE and CE leads both to a greater customer willingness to pay premiums and to a higher loyalty among customers, respectively (and not indistinctly, as in previous studies). Finally, our results recommend moving to a brand-customer portfolio approach for managing marketing activities and a careful assessment of BE and CE when valuing firms, in order to avoid inflating firm value when taking into account both assets in firm valuation processes.

The remainder of this paper is organized as follows. In the second section we briefly introduce our theoretical framework, presenting a review of the relationship between BE and CE. Next, we formulate our research models. The third section provides details of the method followed for gathering and processing the information, and for measuring the latent variables included in the models via the development of scales. Subsequently, we analyze the results obtained from the estimation of the models in terms of goodness of fit and model relationships. Finally, we present our principal conclusions, and suggest future lines of research, aimed at overcoming some of the limitations of this work.

2. Theoretical models

2.1. Marketing capabilities, assets and competitive advantage

Research embedded in the resource-based view theory and its subsequent developments (the dynamic capabilities theories; Teece & Pisano 1994; Teece, Pisano & Shuen 1997), together with specific marketing literature (Srivastava, Shervani & Fahey, 1999; Srivastava, Fahey & Christensen, 2001), establishes that investing in marketing resources influences company profitability and firm value. Several studies have identified different types of marketing capabilities (Morgan, Slotegraaf & Vorhies, 2009; den Hertog, van der Aa & de Jong, 2010) that are useful for generating market-based assets (Srivastava et al., 1998) and competitive advantages (Srivastava et al., 2001). Consistent with these studies, our theoretical models to relate BE and CE share the following structure: marketing capabilities influence the creation of marketing assets; building these assets affords differentiation advantages to companies. More specifically, marketing capabilities generate BE and (at least indirectly) CE. By enhancing these assets, companies secure higher profits from the market via two mechanisms based on product differentiation. First, customers are willing to pay more for a product (Srivastava et al., 1998;

Ailawadi, Lehmann & Neslin, 2003). Second, a stable and sustained purchase level over time is more likely (Gupta & Lehmann, 2003).

Traditionally, literature on the resource-based view has treated marketing capabilities as an aggregate (Vorhies & Morgan, 2005) or as a concept consisting of two types of components: those associated with marketing mix capabilities and those of the strategic marketing process (Morgan, Vorhies & Mason, 2009). Recently, some academics have grouped the former (that is, marketing mix capabilities) in accordance with the type of market-based assets they develop (Srivastava et al., 1998). Thus, marketing mix capabilities involve capabilities developed by the company in order to create and manage stronger and closer relations with its customers (Rust, Zeithaml & Lemon, 2004), as well as others that are associated with the processes and activities that help the company to develop, support and maintain strong brands (Aaker, 1991; Hulland, Wade & Antia, 2007).

Investing in brand capabilities constitutes an outstanding tool for improving the results of an organization (Keller, 1993; Kerin & Sethuraman, 1998; Ambler, 2003; Raggio & Leone, 2007). The greater the value of an organization's brands, the greater its competitive differentiation advantages (Aaker, 1991; Nurittamont & Ussahawanitchakit, 2008; Lassar et al., 1995), the better the results it achieves (Aaker, 1991, 1996; Keller, 1993; Park & Srinivasan, 1994; Nurittamont & Ussahawanitchakit, 2008) and the higher its market value (Simon and Sullivan, 1993; Kerin & Sethuraman, 1998). Studies in Customer Relationship Management and CE (Gupta et al., 2004; Rust, Lemon et al., 2004; Bauer & Hammerschmidt, 2005) likewise conclude that companies that strengthen customer capabilities (by applying Customer Relationship Management techniques) improve their value via future profits generated by the accumulation of CE.

Previous research associates BE and CE with two types of competitive advantages based on differentiation (in contrast to cost leadership; see Porter (1980, 1985)). Namely, these competitive advantages are a greater predisposition to pay a price premium for the company goods and services and a higher customer loyalty. (In our study loyalty is a consequence and not a component of BE, consistent with previous research, e.g.: Taylor, Hunter & Lindberg, 2007; Chen & Myagmarsuren, 2011; Juntunen, Juntunen & Juga, 2011; Geigenmüller & Bettis-Outland, 2012). On the one hand, strong brands generate loyal customers who value these brands above all others in the market, who repurchase the brand on a regular basis, and who consider entirely reasonable to pay more for it (Aaker, 1991; Park & Srinivasan, 1994; Taylor et al., 2007; Jobber & Shipley, 2012). On the other hand, a high CE implies high retention rates and margins that ensure stable income flows in the future (Berger & Nasr, 1998; Gupta & Lehmann, 2003). In other words, in BE and CE literature, customer loyalty is therefore seen

as a common benefit derived from the construction of these market assets. The price premium associated with BE and CE comes from an inelasticity in the demand of loyal customers (Rao & Monroe, 1996).

In summary, previous research indicates that

- brand and customer capabilities increase BE and CE, and that
- BE and CE are positively related with gaining competitive advantages, namely customer loyalty and customer willingness to pay a premium price (Srivastava et al., 1998).

These findings are compatible with the competing explanations that researchers have proposed regarding the link between BE and CE, which we explain next.

2.2. Linking BE and CE

Given that BE and CE provide companies with present and future cash flows, it is reasonable to assume that BE and CE are highly correlated, if not equivalent (Ambler et al., 2002). However, some authors indicate that although built simultaneously there are relevant differences between them, representing specific contributions to company cash flows (Leone et al., 2006). For example, strong brands attract and retain not only consumers, but also more highly qualified employees; and they facilitate relations within distribution channels, presenting opportunities for growth via product line extensions, licenses and franchises (Jones, 2005; Chernatony, McDonald & Wallace, 2010). In turn, customers can generate value for the company beyond their purchases by word-of-mouth or co-creation (van Doorn, Lemon, Mittal, Nass, Pick, Pirner & Verhoef, 2010; Kumar, Aksoy, Donkers, Venkatesan, Wiesel & Tillmanns, 2010). These effects and, therefore, the contribution of BE and CE to firm results might vary across industries (Bick, 2009), thus supporting the notion of BE as CE as separated assets.

Alternatively, some authors propose that BE is one of the antecedents of CE (Rust, Zeithaml & Lemon, 2000; Rust, Lemon et al., 2004; Chen & Myagmarsuren, 2011; Hao et al., 2010; Allaway et al., 2011; Holehonnur, Raymond, Hopkins & Fine, 2009; Ramaseshan et al., 2013). Brands are, together with other CE antecedents (namely, value equity and relationship equity) a means of creating, developing and preserving profitable long-term relationships with customers. If the impact of other CE

antecedents is strong, the correlation of BE and CE could be low. In line with this perspective, Stahl et al. (2012) find that marketing activities grow CE not only through BE but also directly.

These two alternative explanations about the interdependence between BE and CE are compatible with the findings of studies that indicate that

- marketing capabilities increase BE and CE, and that
- BE and CE are positively related with customer loyalty and price premiums (Srivastava et al., 1998).

These studies do not incorporate simultaneously BE and CE and, therefore, the effect of marketing capabilities on them and their effects on competitive advantages could have been confounded (wrongly attributed, due to a potential correlation between BE and CE, arising from their simultaneity or from BE being an antecedent of CE).

Thus, in this study we propose two research models that

- reflect the two perspectives regarding the link between BE and CE and
- shed light about previous results about the role of marketing capabilities on BE and CE and the impact of these assets on loyalty and price premiums.

Our first research model (Figure 1a) establishes that BE and CE are two different views of the same marketing asset (Ambler et al., 2002). In this model, marketing capabilities positively influence a more general marketing asset, which increases loyalty and price premiums, (Srivastava et al., 1998; Srivastava et al., 2001). Following this view, we measure the marketing asset of our first model as a second order construct that is reflected by BE and CE. Assuming that this research model is true, the results of previous studies that include either BE or CE and find that they influence loyalty and price premiums could be due to the fact that these studies are indeed capturing the impact of a more general marketing asset (measured just either through BE or through CE).

In our second research model we set BE and CE separated (Bick, 2009; Leone et al., 2006), although correlated (Figure 1b). Both BE and CE influence loyalty and price premiums, as demonstrated by previous research. If this model is true, by separating the effects of BE and CE on loyalty and price premiums we can test whether these effects have been wrongly validated by previous research due the correlation between BE and CE.

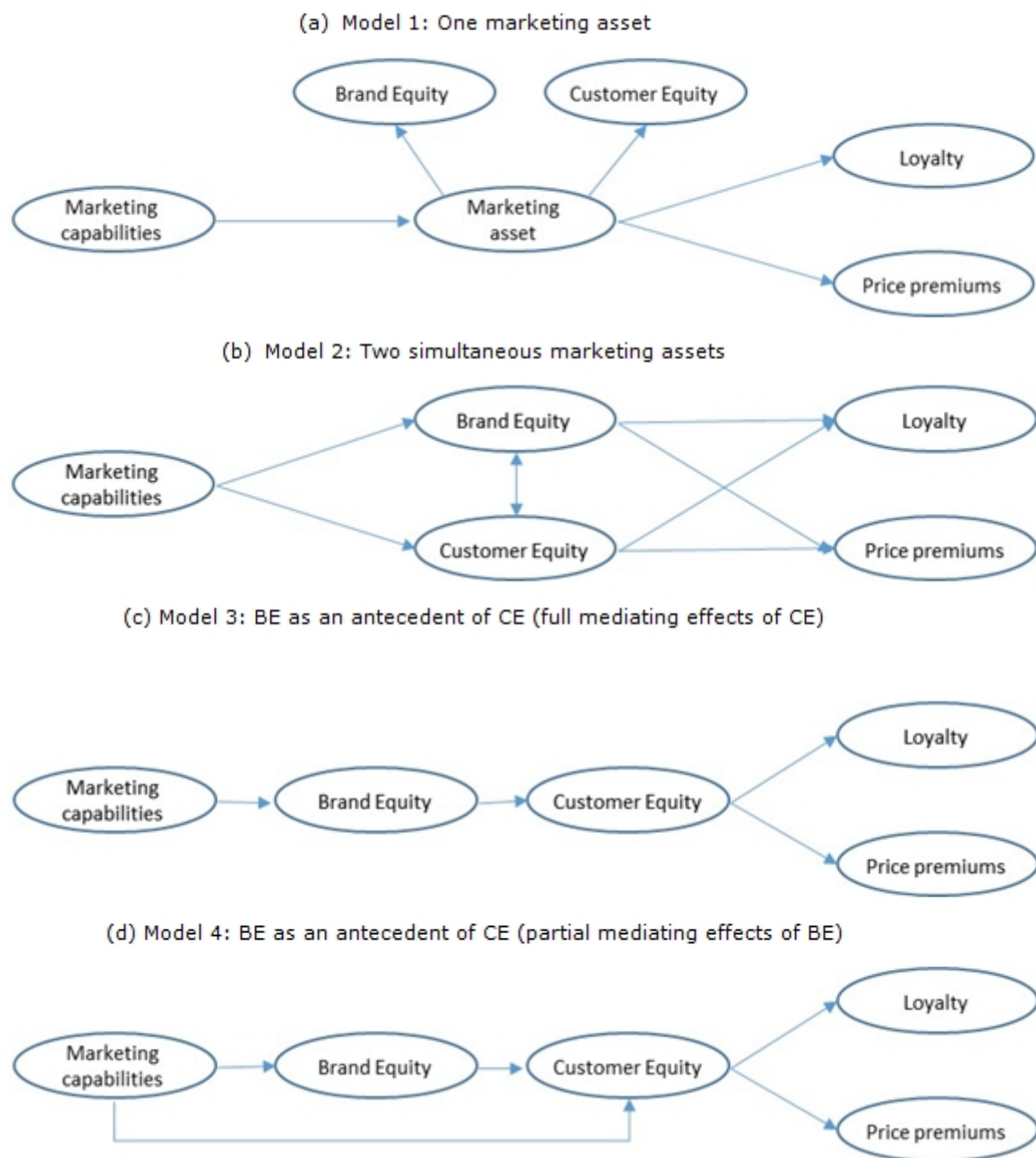


Figure 1. Research Models

Our third model proposes that BE is an antecedent of CE (Rust, Lemon et al., 2004). In this model we assume a full mediation of CE on the relationship between BE and loyalty and price premiums (Figure 1c). We also propose a fourth model in which BE is also an antecedent of CE (Figure 1d). Nevertheless, this model also allows marketing capabilities influencing directly CE formation, following Stahl et al. (2012). Both models are compatible with previous studies

- that support that that marketing capabilities increase customer equity (that indeed omit the full or partial mediation of BE in this effect);
- and that indicate that BE produces loyalty and allows charging price premiums (despite not taking into account the mediating effect of CE on the relationship between BE and these competitive advantages).

3. Method

To test our four research models we employ Structural Equation Modelling. This tool can simultaneously estimate all the relationships included in complex models in which constructs are interrelated. In order to measure the variables of our model, we collected data from a survey of marketing managers working for service companies in Spain. Hence, our results are grounded on managerial practice. Managerial samples have a long tradition in management research (e.g. Greenley, 1998; Jantan, Honeycutt, Thelen & Attia, 2004; Narasimhan, 1990; Pehrsson, 2006) and usually allow reaching similar results than other sources of data (Venkatraman & Ramanujam, 1987; Reinartz, Krafft & Hoyer, 2004).

A market research institute carried out the fieldwork via telephone surveys, using the CATI system, in November 2011. The sample (201 managers) was randomly taken from the 5,745 service companies registered in the database SABI (which contains the financial records of more than one million companies operating in Spain), ensuring an acceptable representativeness of the population. The sample proceeds from the following service industries: accommodation and food service activities; administrative and support service activities; arts, entertainment and recreation; education; financial and insurance activities; information and communication; professional, scientific and technical activities; real estate activities; retail trade, except of motor vehicles and motorcycles; supplies, sewerage, waste management and remediation activities; transportation and storage; and other services.

The latent variables used in the study were measured using scales validated by previous research (see Table 1). Marketing capabilities and BE were measured using primary Likert-type scales. CE indicators were measured using typified numerical scales as described in Table 1. The competitive advantages were assessed through price premium (Porter 1980; Prajogo, 2007; Winrow & Johnson, 2010) and customer loyalty (Nurittamont & Ussahawanitchakit, 2008; Aaker, 2012). For the former we used a seven-point scale of prices relative to the competition (“In relation with the competition, the prices of

the services provided by your brands are: Over 20% lower; Between 11% and 20% lower; Up to 10% lower; Similar; Up to 10% higher; Between 11% and 20% higher; Over 20% higher”). For customer loyalty, we devised a weighted average of five levels of loyalty multiplied by the estimated percentage of customers that fall within each level (“Distribute your current customer portfolio in accordance with the degree of loyalty shown towards your company when they have to buy a service in this category: between 90% and 100% of their purchases; between 70% and 89%; between 50% and 69%; between 30% and 49%; less than 30% of the times”).

4. Analysis and results

We applied a structural equations model estimated by maximum likelihood using the SPSS Amos 19 software program. As in any structural equations model, the analysis was implemented in two phases. First, we evaluated the psychometric properties of the measurement scales proposed for the latent variables of the model using both exploratory and confirmatory analysis techniques. Next, we assessed the goodness-of-fit of our models, which is particularly relevant for model comparisons, and evaluated their estimates.

4.1. Validation of scales

We initially applied an exploratory factor analysis and a reliability analysis to the items that define the scales of the latent variables of our model. After this initial filter, we dropped to two items from the original scale of marketing capabilities, due to incorrectly loadings in other variable. Hence, the marketing capabilities scale maintained eleven out of thirteen indicators. For the remaining variables, BE and CE, every item loads on its corresponding latent variable. Subsequently, the analysis of the psychometric properties of our latent variables supports the validation of the scales finally used in this study (Table 1). Following Hair, Black, Babin, Anderson and Tatham (2006), the model presents a good global fit. Furthermore, all the indicators present standardized lambda coefficients that are both significant and greater than 0.5 (they vary between 0.62 and 0.88). Likewise, all the indicators have a clear relationship with each of the underlying factors they measure ($R^2 > 0.3$). Convergence validity of our model is adequate, according to the average variance extracted (AVE) of our latent variables. Similarly, the composite reliability values for the latent variables in the model exceed the critical value

of 0.7 (Nunnally, 1978; Norusis, 1993). Additionally, the t-values of each indicator show that they are significant (Fornell & Larcker, 1981).

With regard to discriminant validity, none of the confidence intervals of the estimated correlation between every pair of constructs contains 1. Secondly, we tested a restricted model whose correlations estimates between latent variables are constrained to one towards our (unrestricted) model. The restricted model showed a significantly worse overall fit $\chi^2 = 141.84$; $\Delta\chi^2 = 5.41$. Finally, the square root of the AVE of each latent variable is higher than the correlations of that variable with any other construct (Table 2). All together, these tests support the discriminant validity of the latent variables of our study.

To check for potential common method bias, we applied Harman's single-factor test with a confirmatory factor analysis (e.g., Podsakoff, Mackenzie, Jeong-Yeon Lee & Podsakoff, 2003). This test incorporates a single latent common factor in the model under study; subsequently it evaluates whether this factor can explain the majority of the model variance using a chi-square difference test. In our case, we implemented the test with regard to our basic measurement model with the three factors. The chi-square value of the single-factor model was 175.67 (d.f.=94), significantly worse than our basic measurement model with the three factors: $\Delta\chi^2 = 39.23$, $\Delta d.f. = 1$ $p < 0.001$. This provides evidences that the measurement model of our study is robust to common method bias.

4.2. Model comparison

Table 3 shows the goodness-of-fit indexes of estimation of models 1 to 4. According to these indexes, models 1, 2 and 4 have an acceptable goodness-of-fit. Models 1 and 2 have better goodness-of-fit than models 3 and 4. In other words, the models that follow the perspective of Leone et al. (2006) have a higher goodness-of-fit than the models that reflect the point of view of Rust, Lemon et al. (2004). Consequently, our subsequent analyses are focused on models 1 and 2.

Variables	λ	R^2	Reliability		Convergent validity	
			Cronbach's α	Composite reliability	Variance Extracted	t value
Marketing Capabilities Assess your marketing capabilities relative to your principal competitors in the following areas. To do so use a scale of -5 to +5, where -5= “a great deal worse than your competitors”, 0= “the same as your competitors” and 5= “a great deal better than your competitors” (Adapted from Morgan et al. (2009)):			.94	.93	.56	
Establishing a dialogue with the target audience.	.71	.50				----
Developing an initial test of the company's services by the target audience.	.62	.39				10.01
Satisfying the long-term needs of the target audience.	.62	.38				9.09
Maintaining loyalty among the attractive customers.	.64	.40				8.19
Strengthening the relations with the attractive customers.	.73	.53				9.40
Maintaining a positive relationship with ex-customers.	.79	.62				10.13
Establishing desirable brand associations in the mind of the consumer.	.83	.69				10.63
Maintaining a more positive brand image than that of your competitors.	.82	.68				10.53
Maintaining high levels of brand recognition within the market.	.82	.68				10.55
Making the most of brand equity to extend your brands.	.80	.64				10.30
Monitoring your brand image and recognition among your target audience.	.80	.64				10.30
Brand Equity Likert scale (0-10), extracted from Keller (2001)			.84	.84	.64	
In your market, your brands are very well known.	.70	.49				---
Among your customers, the image of your brands is very good.	.88	.77				9.88
Among your customers, the perceived quality of your brands is very good.	.81	.65				9.64
Customer Equity With respect to the customer base of the market in which you operate (the variables have been typified in a (0-10) scale to make them comparable to other scales in our questionnaire. Both variables are CE calculation components, e.g.: Berger and Nasr (1998), Gupta and Lehmann (2003), Gupta et al. (2004), Rust, Lemon et al. (2004), Rust, Ambler et al. (2004), Fader et al. (2005a, 2005b):			.72	.77	.63	
What is the average retention rate of your company's customers?	.75	.56				---
What is the average annual income obtained in your company?	.84	.70				4.72

GFI (goodness of fit index): .913; NFI (Normed fit index): .927; CFI (Comparative fit index):.975; RMSEA (root mean square error of approximation): .051; $S-B\chi^2=136.43$ (d.f. 93, $p=0.002$); $\chi^2/d.f.=1.46$

Table 1. Reliability and Convergent Validity of Model Variables

Latent variables	Mean	Standard Error	(1)	(2)	(3)
Marketing capabilities (1)	7.82	1.29	0.75		
Brand equity (2)	7.67	1.19	0.52	0.80	
Customer equity (3)	2.87	1.88	0.30	0.41	0.79

Figures in the principal diagonal (in bold) correspond to the square root of the AVE of each latent variable; figures below the principal diagonal are the correlations between constructs.

Table 2. Descriptive Estimates of Latent Variables

	Model 1	Model 2	Model 3	Model 4	Model 2 (restricted)
χ^2	169.63	169.28	265.70	183.34	170.91
d.f.	125	123	126	125	125
$\chi^2/\text{d.f.}$	1.36	1.38	2.10	1.47	1.37
p	0.005	0.004	0.000	0.001	0.004
GFI	0.90	0.90	0.86	0.90	0.90
CFI	0.97	0.97	0.92	0.97	0.97
NFI	0.91	0.91	0.87	0.90	0.91
RMSEA	0.044	0.045	0.078	0.051	0.045
$D\chi^2$ (p-values)	0.35 (0.55)	-	96.42 (<0.01)	14.06 (<0.01)	1.63 (0.20)

Table 3. Goodness of Fit of the Four Research Models

Figure 2 shows the estimation results for models 1 and 2. Model 1 proposes that marketing capabilities build an overall marketing asset that is positively related with loyalty and customer willingness to pay price premiums. All the paths in model 1 are significant. Model 2 proposes that marketing capabilities build BE and CE and that both assets positively influence loyalty and customer willingness to pay price premiums. However, in this model our results indicate that BE does not affect customer loyalty and that CE has no impact on price premiums. Given these results, we have estimated a restricted version of model 2, where the non-significant coefficients are set to zero. Next, we have compared it to the “full” version of model 2. The difference in the fit of these two versions of model 2 is not significant (χ^2 test; Table 3). Moreover, the values of the restricted for the RMSEA, GFI, NFI and CFI are virtually identical to those of the original model. Thus, we present model 1 as-is in Figure 2 but, for parsimony, our subsequent analyses of model 2 (including Figure 2) will make reference to its restricted version.

There is not a significant difference between the overall fit of the models 1 and 2 (χ^2 incremental test). Both models represent Leone et al. (2006) perspective. Models coefficients indicate that the accumulation of marketing assets favors gaining competitive advantages (and therefore improving corporate results). Particularly, model 1 shows that the effect of the marketing asset on price premiums is positive and significant (.36), while its impact on customer loyalty, although also positive and significant, is lower (.19). Furthermore, model 1 indicates that marketing capabilities influence price premiums and loyalty, mediated by the building of the marketing asset. The total effects of marketing capabilities on these two competitive advantages are .23 and .12, respectively. According to model 2, BE does not directly improve loyalty and CE does not have a significant direct influence on customer willingness to pay price premiums. More specifically, the effect of CE on average loyalty is .21 and the impact of BE on price premium is .29. Hence the total effect of marketing capabilities on loyalty is .09 (mediated by CE building) and .017 on price premiums (mediated by BE building).

Hence, our models support Leone et al. (2006) perspective. Marketing activities affect the elements that grow BE and CE. This provokes a significant degree of simultaneity and overlapping between both assets, against the antecedent-consequent (BE-CE) relationship proposed by Rust, Zeithaml et al. (2004). The results of our estimations of model 1 suggest that BE and CE are first order constructs that reflect a broader marketing asset construct. Consistently, our results regarding model 2 indicate that there is a positive and significant correlation of .31 between BE and CE. The sign and significance of the estimated coefficients in both models provide an extra evidence of Leone et al. (2006) perspective.

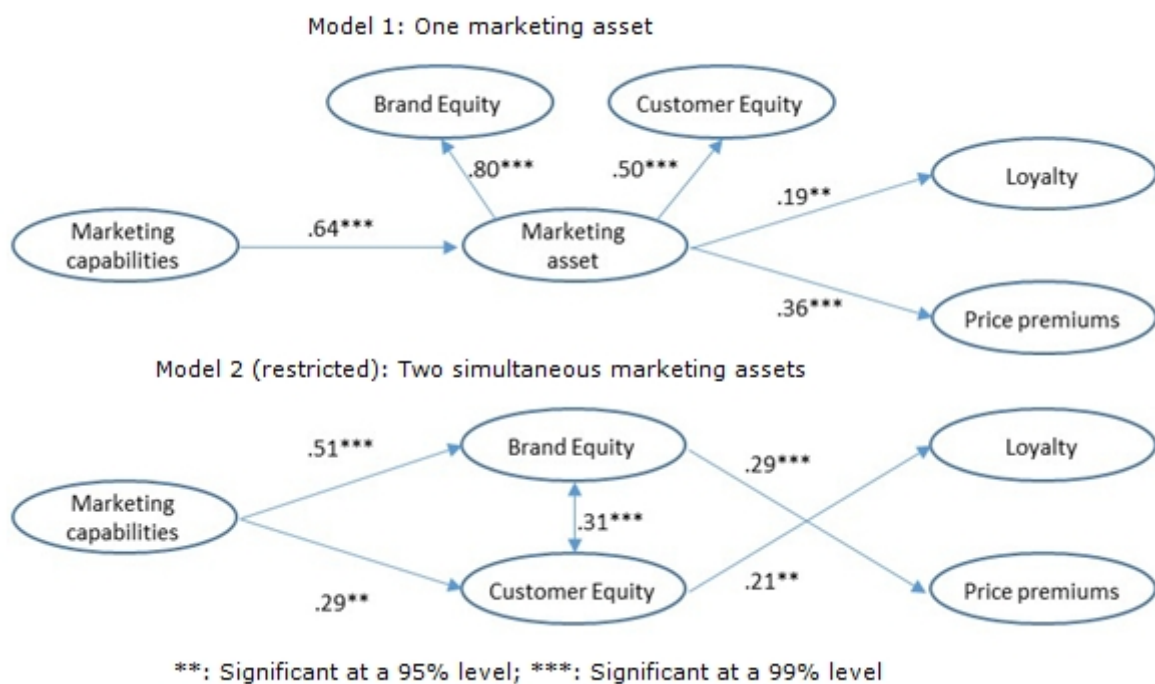


Figure 2. Estimation results

5. Managerial implications

In this study we compare two alternative approaches about the relationship between BE and CE. On the one hand, Leone et al. (2006) approach suggests that marketing activities build both assets simultaneously, even to the extent of being different sides of the same coin (Ambler et al., 2002). On the other hand, Rust, Lemon et al. (2004) propose that BE is an antecedent of CE. We have estimated four alternative models that support these views, employing information provided by marketing managers. Our results support the approach of BE and CE simultaneity. The two models that we

propose supporting this view have a higher goodness of fit than the other models that support that BE is an antecedent of CE. The goodness of fit of the former models is indeed quite similar, thus impeding to establish the superiority of one of them. This similar performance recommends caution when interpreting their results and analyzing their managerial implications.

Research model 1 proposes that BE and CE are two indicators of a broader marketing asset. Research model 2 separates BE and CE, but admits that both assets are highly correlated. Consistent with research model 1, the results of research model 2 confirm this significant correlation, which is .31 in our study. With regard to the impact of BE and CE on customers' loyalty and their willingness to pay premiums prices, the models offer different insights. Our first model indicates that the marketing asset has a positive influence on both loyalty and price premiums. Nevertheless, when separating BE and CE, BE only influences directly price premiums, while CE only has a direct influence on loyalty (.05 of confidence level). A potential explanation for this apparent divergence of results might be the existence of synergies between BE and CE. When separating BE and CE, their impact on competitive advantages appears more attenuated than when incorporating them in a model through a broader marketing asset. We observed differences between models 1 and 2 regarding the magnitude of the total effects of marketing capabilities on loyalty and price premiums (.03 and .06, respectively). Model 1 indicates that these effects are .12 and .23, respectively, while in model 2 these are .09 and .17. The results of model 2 indicate that BE and CE are correlated. Consequently, BE also indirectly influences average loyalty via CE. Similarly, CE has an indirect impact on price premiums. Hence, the indirect effect of BE on loyalty is .065, while the indirect effect of CE on price premiums is .09.

Our findings recommend paying attention to the coincidences and the differences between brands and customers management. Otherwise, resource allocation in marketing activities can be inefficient. In this regard, Ambler et al. (2002) indicate that brands and customers create value for the company by distinct and overlapping mechanisms. Acquiring new customers for current offerings, cross-buying from current customers, the ability to charge price premiums and reducing marketing costs are the common mechanisms that both brand and customer management can employ to provide value to companies. Extending into new areas with new customers and increasing purchases of current offerings by existing customers are mechanisms that correspond exclusively to brand and customer management, respectively. Although based on previous research, up to our knowledge this division of BE, CE and BE-CE mechanisms is not supported empirically yet in a study that jointly incorporates both assets. For instance, our research model 2 attributes the ability to charge price premiums basically to brand

management, in contrast to Ambler and colleagues indications. Thus, our results recommend being cautious with their division of brand and customer management areas.

In any case, it is clear that brand and customer management cannot be separated. The managers in our sample indicate that BE and CE are built simultaneously, regardless they are the different indicators of a broader marketing construct or two different (but correlated) assets. Creating a solid base of marketing capabilities leads to gaining competitive advantages via these marketing assets. Both BE and CE are necessary to generate value for companies, given that they allow creating loyal customers who are willing to pay higher prices for firm products. Combining these two competitive advantages allows obtaining profits both in the short and in the long term. But how to integrate brand and customer management? Leone et al. (2006) recommend conceiving brand and customer management as a matrix where company brands are rows and customers (or segments) are the columns, thus taking into account both the rows and columns in order to arrive to optimal product solutions. However, implementing this recommendation can be quite challenging in practice.

Managing brands and customers portfolios together implies somehow moving to a management of brand-customer portfolios. The idea of brand-customer portfolios is appealing, but putting it in practice is only straightforward if there are not overlaps between the brands and the customers of the brand-customer portfolios identified by companies. In the simplest case, each brand of the company targets a single segment. Nevertheless, this situation does not usually occur in practice.

(a) No overlapping brand-customer portfolios

	Brand 1	Brand 2	Brand 3	Brand 4	Brand 5
Segment A	X	X	X		
Segment B				X	
Segment C				X	
Segment D					X

(b) Overlapping brand-customer portfolios

	Brand 1	Brand 2	Brand 3	Brand 4	Brand 5
Segment A	X	X			
Segment B		X	X		
Segment C			X		
Segment D			X	X	X

Figure 3. Brand-customer portfolios

Figure 3 illustrates two situations in which this condition does not hold, for a hypothetical firm selling five brands to four customer segments. Figure 3a shows a business setting where one segment purchases three company brands (segment A, brands 1,2 and 3), two segments are served by the same brand (segments B and C, brand 4) and one segment acquires only one brand (segment D, brand 5). This business setting is not problematic for adopting a brand-customer portfolio approach, as there are not overlaps between brands and customers. Here, the most natural solution is dividing the brand-customer matrix in three brand-customer portfolios: a multi-brand portfolio, a multi-segment portfolio and a single brand-customer portfolio, corresponding to the three aforementioned combinations of brands and customers. All the three portfolios require an adequate management of customer acquisition and retention, together with brand or brands with a high awareness and an appropriate image. Additionally, for the first portfolio, promoting cross-selling can be key to improve profitability. Similarly, the second portfolio requires an appropriate policy to increase up-selling and customer referrals, as well as a precise segmentation to achieve high retention rates in each segment.

Figure 3b shows a business setting where the separation of brands and customers in independent brand-customer portfolios is not possible. In effect, every brand-customer combination in Figure 3b connects with another brand or customer segment. In this situation, companies might be forced to organize their business around brands or customers, and not around brand-customer portfolios, in order to manage efficiently their business.

Finally, our results have implications for firm valuation processes. An accurate firm valuation requires carefully measuring the company' intangible assets and incorporating them in firm value. According to our results, BE and CE could be to a high extent the same asset. Experts involved in firm valuation need to take into account this, in order to avoid oversizing value. In this regard, quantifying the overlap between BE and CE is key for achieving an adequate valuation. This is indeed a challenging task. In an exploratory study, Romero and Yagüe (2015) show that this overlap varies across industries. In effect, the relative importance of BE and CE for a company depends on industry factors (Bick, 2009), among others. Depending on data availability, experts involved in firm valuation could depart from measuring one asset and quantify the non-coinciding part provided by the other asset. For example, in the case of companies with proper databases to forecast customers' retention and margins, experts could firstly calculate the CE provided by their customer base using well-knowns methods (e.g.: Fader et al., 2005a, 2005b). Subsequently, they would need to value the impact of company brands that does not spill over customers (for example: channel relationships, attraction of higher quality employees; Leone et al., 2006). In contrast, in the case of companies where this information is not available, experts could firstly

apply BE measurement methods (Yoo & Donthu, 2001; Christodoulides & de Chernatony, 2010) and, subsequently value the profits derived from customer management that not spill directly over customers' purchases. According to Kumar et al. (2010) these profits include customer referral value (the value provided by customers by recommending company brands in exchange of some incentives) and customer knowledge value (the value provided by customers by sharing their knowledge about brands to companies, thus facilitating product improvement, new product development, etc.).

6. Conclusions and future lines of research

This work provides new evidence regarding the relationship between BE and CE. We have studied this relationship within the resource-based view framework. To do so, we test two alternative approaches about the link between BE and CE. The first approach suggest that both assets are built simultaneously, while the second one suggests that BE is an antecedent of CE. Our results support that BE and CE are built simultaneously. Moreover, they could be two indicators of a broader marketing asset. Our results also indicate that BE allows companies to charge price premiums and that CE is positively related with loyalty, in contrast to previous research that attributes these competitive advantages to both BE and CE. From a theoretical point of view our results recommend devoting efforts to integrate brand and customer management research. For instance, the role of brands on customer referrals or on enhancing customers sharing their knowledge about the product with companies could be fruitful research directions. Similarly, studying the role of customer management on brand image, brand awareness, etc. would help academics and practitioners obtaining a deeper comprehension regarding marketing profitability formation. From a managerial perspective, our results point out the relevance of clarifying how brands and customers contribute to value creation. Our findings also recommend moving from a brand portfolio or customer portfolio management to a brand-customer portfolio management when possible. Finally, our results indicate that the simultaneity of BE and CE must be taken into account when performing firm valuation processes.

To sum up, the conclusions of our study have implications both for researchers in the area of BE and CE and marketing profitability, and for practitioners that need somehow to balance the management of their brands and customers or to assess correctly the value of firms. Nevertheless, this work is not free of limitations. First, some managers in our sample might inaccurately assess customer behaviors, perceptions, etc., and their performance in their markets. The employment of other measurement procedures would increase the external validity of our research. In this regard, the difficulties we had in

finding a scale for measuring CE that reflects the main financial components of the concept deserves special attention: the scale used consists of two indicators whose measurement is different from that of the rest of the variables; this fact hinders a direct comparison of the average BE and CE levels achieved by the companies in our sample. Moreover, this may affect the magnitudes of some of the coefficients estimates. Secondly, the fact that our analysis was carried out on different service sectors prevents us from knowing the stability of the models if they were to be applied to other industries, as suggested by Bick (2009). Enriching our sample could help to assess a potential generalization of our results and to detect whether the effects of BE and CE upon competitive advantages are similar or different according to the type of industry. Finally, we have focused on two main outputs provided by brand and customer management. However, other outputs could have been included in our work, thus expanding the scope and measurement of competitive advantages that affect economic results in terms of profit margins and sales growth.

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